

## Product Brief

# Sense2Go Development Kit

24 GHz Sensor Development Kit Utilizing Infineon XMC4200 32-bit ARM® Cortex™-M4 MCU Series

This development kit allows the user to implement and test several sensing applications at the 24 GHz ISM band such as doppler based movement detection, doppler based direction of movement detection, doppler based speed estimation and Frequency-Modulated Continuous Wave (FMCW) based distance measurement of stationary targets. The kit consists of the BGT24MTR11 transceiver MMIC and a XMC4200 32-bit ARM® Cortex™-M4 Microcontroller for signal processing and communication via USB.

The CPU is already preprogrammed using Infineon's DAVE™ development tool. The module also comes bundled with a stand-alone firmware for movement detection without the aid of a PC, so this platform is a good starting point for your own applications. It samples up to 2 IF channels of the transceiver chipset and communicates via USB interface to a connected PC. A provided PC application GUI (Windows XP/Vista/7/8) can be used to display and analyze acquired data in time and frequency domain.

### Applications

- Indoor/outdoor smart lighting
- Intruder alarm
- Motion detectors
- Intelligent door openers

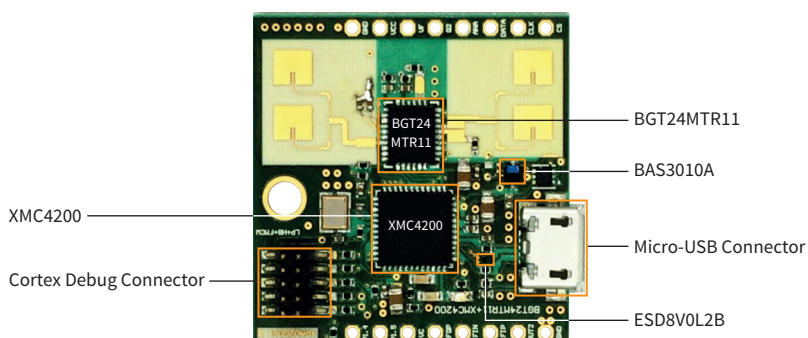
### Features

- Capability to detect motion, speed and direction of movement (approaching or retreating) and software based FMCW for distance measurement
- Smallest known 24 GHz ISM band development kit
- BGT24MTR11 – 24 GHz highly integrated RF MMIC
- XMC4200 ARM® Cortex™-M4 – 32-bit industrial microcontroller
- Debug over cortex 10 pin debug connector
- Low power mode
- Integrated patch antenna

### Contents of the kit include

- User manual
- SW GUI to operate kit
- Micro USB cable to USB cable (3')

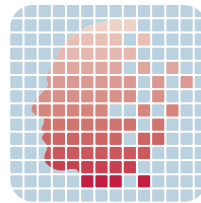
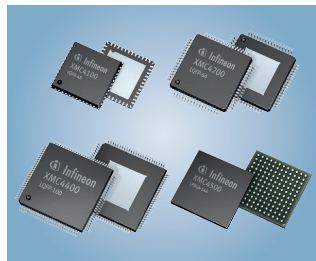
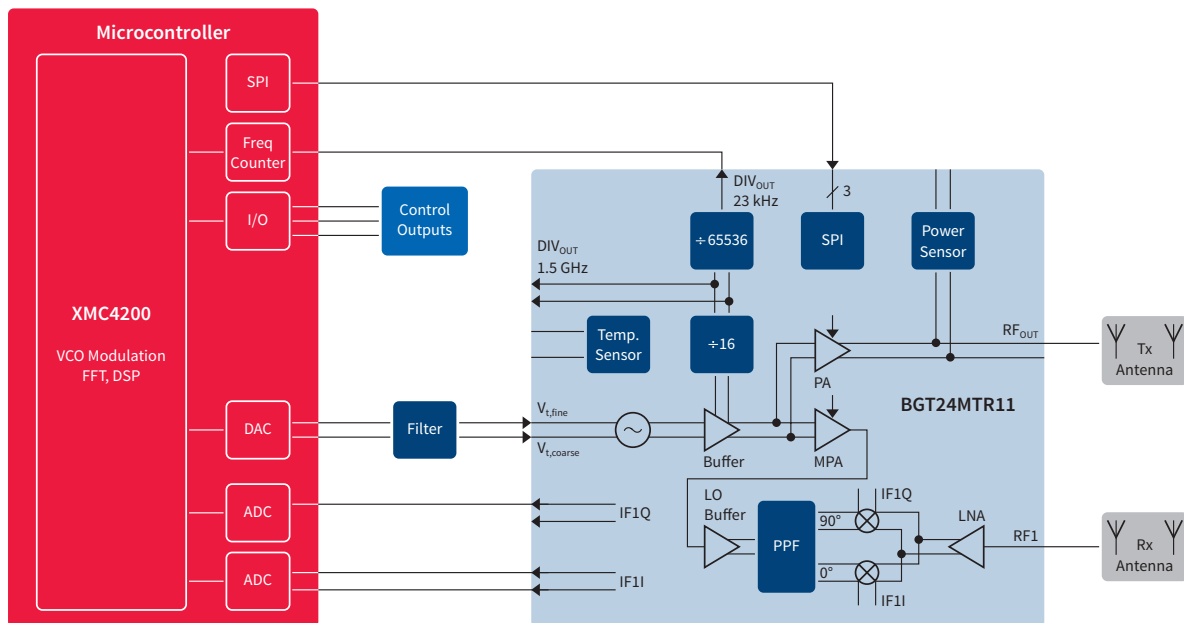
### Sense2Go Development Kit – Main Components



# Sense2Go Development Kit

24 GHz Sensor Development Kit Utilizing Infineon XMC4200 32-bit ARM® Cortex™-M4 MCU Series

Sense2Go Block Diagram



## Details

- [www.infineon.com/24GHz](http://www.infineon.com/24GHz)
- [www.infineon.com/xmc](http://www.infineon.com/xmc)
- [www.infineon.com/dave](http://www.infineon.com/dave)

## Product Summary

Type	Description	Ordering Code (OPN)
BGT24MTR11	24 GHz radar chip with 1 transmitter and 1 receiver in PG-VQFN-32-9 package	BGT24MTR11E6327XUMA1
Sense2Go	Development kit	DEMOSENSE2GOTOBO1
XMC4200-Q48K256 AB	80 MHz ARM® Cortex™-M4 with high resolution PWM unit, 256 kB flash, 40 kB RAM, rich analogmixed signal, timer/PWM and communication peripherals in PG-VQFN-48	XMC4200Q48K256ABXUMA1
BAS3010A-03W	Medium power schottky diode for high efficiency DC/DC conversion, fast switching, protection and clamping applications	BAS3010A03WE6327HTSA1
ESD8V0L2B-03L	Low capacitance TVS diode ESD / transient protection of high-speed data lines in a small form factor of 1.0 x 0.6 x 0.4 mm	ESD8V0L2B03LE6327XTMA1

Published by  
Infineon Technologies AG  
85579 Neubiberg, Germany

© 2015 Infineon Technologies AG.  
All Rights Reserved.

Visit us:  
[www.infineon.com](http://www.infineon.com)

Order Number: B142-I0102-V1-7600-EU-EC-P  
Date: 03/2015

### Attention please!

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

### Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office ([www.infineon.com](http://www.infineon.com)).

### Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office. Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.